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cont

No.: 1031/205), which is commonly assigned to BioCal Technology, Inc., the assignee of the present invention, and which has been fully incorporated by reference herein) is more specifically directed to the novel on-column axial detection concept.

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### IN THE CLAIMS

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Sub C1  
B4

1. (Amended) A detection system for a bio-separation device having a separation channel, comprising:  
a detection section along the separation channel defining a detection zone;  
means for introducing excitation radiation axially at the detection zone as analytes pass the detection zone, said means for introducing radiation including an optic fiber having an end in close proximity to the detection zone; and  
means for detecting radiation emission from the detection zone.

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Sub C1  
B5

15. (Amended) The detection system as in claim 10, wherein the means of introducing excitation radiation comprises two fibers directed at the detection zone, wherein each fiber is coupled to a different one of the at least two radiation sources.

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Sub C1  
B6

30. (Amended) A bio-separation instrument, comprising:  
a separation channel;  
means for separating a sample in the separation channel into analytes; and  
a detection system, comprising:  
(a) a detection section along the separation channel defining a detection zone;

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*B6  
cont*

(b) means for introducing excitation radiation axially at the detection zone as analytes pass the detection zone, said means for introducing excitation radiation including an optic fiber having an end in close proximity to the detection zone; and

(c) means for detecting radiation emission from the detection zone.

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*Sub C1*

34. (New) A detection system for a bio-separation device having a separation channel, comprising:

*B7*

a detection section along the separation channel having a second width larger than the first width and a transition from the first width to the second width, the detection section defining a detection zone at a distance of 100 to 500 times the second width from the transition;

means for introducing excitation radiation at the detection zone as analytes pass the detection zone; and

means for axially detecting radiation emission from the detection zone.

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